King County
Department of Development and Environmental Services
Land Use Services Division
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Subdivision Density and Dimension Calculations

Alternative formats available upon request

_____
File Number

(To be filled in by DDES)

PRELIMINARY SUBDIVISION WORKSHEET RELATING TO DENSITY AND DIMENSIONS

Several development regulations play a role in the creation of a subdivision within King County. Determining the allowable density, minimum density, and a lot width on a piece of property can be confusing. This worksheet will assist you in correctly applying specific portions of the code and will be used to determine if a proposed subdivision or short subdivision meets the density and dimensions provisions of the King County Zoning Code (Title 21A). This worksheet is designed to assist applicants and does not replace compliance with adopted local, state and federal laws.

Pre-application conferences are required prior to submittal of a subdivision or short subdivision. These conferences help to clarify issues and answer questions. They may save you both time and money by eliminating delays resulting from requests for additional information and revisions. You may call 206-296-6600 to find out how to arrange for a pre-application conference.

Worksheet Prepared By: _____ **Date:** _____
(Print Name)

Subdivision Name: _____

Comprehensive Plan Land Use Designation: _____

Zoning: _____ _____ _____

If more than one Comprehensive Plan Land Use designation or zone classification exists for the property, show the boundary between the land uses or zones and the area within each on the preliminary plat map. If a single lot is divided by a zone boundary, transferring density across zones on that lot may be permitted subject to the provisions of K.C.C. 21A.12.200.

Please complete only the applicable portions of this form

I. Site Area (K.C.C. 21A.06.1172) also see (K.C.C. 21A.12.080):

Site area (in square feet) is the gross horizontal area of the project site, less submerged lands as defined by K.C.C. 21A.06.1265, and less areas which are required to be dedicated on the perimeter of a project site for the public rights-of-way.

_____ square feet in submerged land (any land below the ordinary high water mark – see K.C.C. 21A.06.825)
\+ _____ square feet in perimeter rights-of-way which will be required to be dedicated
= _____ Total

Calculation:

_____ Gross horizontal area of the project site

– _____ Total submerged lands and rights-of-way

_____ Site area in square feet
NOTE: To continue calculations, convert site area in square feet to acres by dividing by 43,560

_____ Site area in acres
NOTE: When calculating the site area for parcels in the RA Zone, if the site area should result in a fraction of an acre, the following shall apply: Fractions of .50 or above shall be rounded up to the next whole number and fractions below .50 shall be rounded down. Example: If the site area in acres is 19.5 acres (less the submerged land and less the area that is required to be dedicated on the perimeter of a project site for public right-of-way) the site area can be rounded up to 20 acres. No further rounding is allowed. (See K.C.C. 21A.12.080)

II. Base Density (K.C.C. 21A.12.030 - .040 tables):

The base density is determined by the zone designations(s) for the lot.

_____ du/acre

III. Allowable Dwelling Units and Rounding (K.C.C. 21A.12.070):

The base number of dwelling units is calculated by multiplying the site area by the base density in dwelling units per acre (from K.C.C. 21A.12.030 - .040 tables).

_____ site area in acres (see Section 1.) X _____ base density (see Section II)

= _____ allowable dwelling units

Except as noted below, when calculations result in a fraction, the fraction is rounded to the nearest whole number as follows:

A. Fractions of .50 or above shall be rounded up; and
B. Fractions below .50 shall be rounded down.

NOTE: For parcels in the RA Zone, no rounding is allowed when calculating the allowable number of dwelling units. For example, if the calculation of the number of dwelling units equaled 2.75, the result would be 2 dwelling units. Rounding up to 3 is not allowed. (See K.C.C. 21A.12.070(E)).

IV. Required On-site Recreation Space (K.C.C. 21A.14.180):

This section must be completed only if the proposal is a residential development if more than four dwelling units in the UR and R zones, stand-alone townhouses in the NB zone on property designated Commercial Outside of Center if more than four units, or any mixed use development if more than four units. Recreation space must be computed by

multiplying the recreation space requirement per unit type by the proposed number of such dwelling units (K.C.C. 21A.14.180). Note: King County has the discretion to accept a fee in lieu of all or a portion of the required recreation space per K.C.C. 21A.14.185.

Apartments and town houses developed at a density greater than eight units per acre, and mixed use must provide recreational space as follows:

90 square feet X	_____	proposed number of studio and one bedroom units		_____
170 square feet X	_____	proposed number of two bedroom units	+	_____
170 square feet X	_____	proposed number of three or more bedroom units	+	_____
		Recreation space requirement	=	_____

Residential subdivisions, townhouses and apartments developed at a density of eight units or less per acre must provide recreational space as follows:

390 square feet X	_____	proposed number of units	=	_____

Mobile home parks shall provide recreational space as follows:

260 square feet X	_____	proposed number of units	=	_____

V. Net Buildable Area (K.C.C. 21A.06.797):

This section is used for computing minimum density and must be completed only if the site is located in the R-4 through R-48 zones and designated Urban by the King County Comprehensive Plan. The net buildable area is the site area (see Section I) less the following areas:

	_____	areas <u>within</u> a project site which are required to be dedicated for public rights-of-way in excess of sixty (60') of width
+	_____	sensitive areas and their buffers, to the extent they are required by King County to remain undeveloped
+	_____	areas required for above ground stormwater control facilities including, but not limited to, retention/detention ponds, biofiltration swales and setbacks from such ponds and swales
+	_____	areas required by King County to be dedicated or reserved as on-site recreation areas. Deduct area within stormwater control facility if requesting recreation space credit as allowed by K.C.C. 21A.14.180 (see Section IV)
+	_____	regional utility corridors, and
+	_____	other areas, excluding setbacks, required by King County to remain undeveloped
=	_____	Total reductions

Calculation:

_____ site area in square feet (see Section1)

–	_____	Total reductions
=	_____	Net buildable area in square feet NOTE: convert site area is square feet to acres by dividing by 43,560
=	_____	Net buildable area in acres

VI. Minimum Urban Residential Density (K.C.C. 21A.12.060):

The minimum density requirement applies only to the R-4 through R-48 zones. Minimum density is determined by multiplying the base density in dwelling units per acre (see Section II) by the net buildable area of the site in acres (see Section V) and then multiplying the resulting product by the minimum density percentage from the K.C.C. 21A.12.030 table. The minimum density requirements may be phased or waived by King County in certain cases. (See K.C.C. 21A.12.060.) Also, the minimum density requirement does not apply to properties zoned R-4 located within the rural town of Fall City. (See K.C.C. 21A.12.030(B)12.)

Calculation:

_____ base density in du/ac (see Section II) X _____ Net buildable area in acres (see Section V)
= _____ X minimum density % set forth in K.C.C. 21A.12.030 or as adjusted in Section VII
= _____ minimum dwelling units required

VII. Minimum Density Adjustments for Moderate Slopes (K.C.C. 21A.12.087):

Residential developments in the R-4, R-6 and R-8 zones may modify the minimum density factor in K.C.C. 21A.12.030 based on the weighted average slope of the net buildable area of the site (see Section V). To determine the weighted average slope, a topographic survey is required to calculate the net buildable area(s) within each of the following slope increments and then multiplying the number of square feet in each slope increment by the median slope value of each slope increment as follows:

_____ sq. ft 0-5% slope increment X 2.5% median slope value = _____
\+ _____ sq. ft 5-10% slope increment X 7.5% median slope value = _____ +
\+ _____ sq. ft 10-15% slope increment X 12.5% median slope value = _____ +
\+ _____ sq. ft 15-20% slope increment X 17.5% median slope value = _____ +
\+ _____ sq. ft 20-25% slope increment X 22.5% median slope value = _____ +
\+ _____ sq. ft 25-30% slope increment X 27.5% median slope value = _____ +
\+ _____ sq. ft 30-35% slope increment X 32.5% median slope value = _____ +
\+ _____ sq. ft 35-40% slope increment X 37.5% median slope value = _____ +
_____ Total square feet in net buildable area _____ Total square feet adjusted for slope

Calculation:

_____ total square feet adjusted for slope divided by _____ total square feet in net buildable area
= _____ weighted average slope of net buildable area
= _____ % (Note: multiply by 100 to convert to percent – round up to nearest whole percent)

Use the table below to determine the minimum density factor. This density is substituted for the minimum density factor in K.C.C. 21A.12.030 table when calculating the minimum density as shown in Section VI of this worksheet.

Weighted Average Slope of Net Buildable Area(s) of Site:	Minimum Density Factor
0% -- less than 5%	85%
5% -- less than 15%	83%, less 1.5% each 1% of average slope in excess of 5%
15% -- less than 40%	66%, less 2.0% for each 1% of average slope in excess of 15%

EXAMPLE CALCULATION FOR MINIMUM DENSITY ADJUSTMENTS FOR MODERATE SLOPES:

	_____	sq. ft 0-5% slope increment X 2.5% median slope value =	_____	
+	10,000	sq. ft 5-10% slope increment X 7.5% median slope value =	750	+
+	20,000	sq. ft 10-15% slope increment X 12.5% median slope value =	2,500	+
+	_____	sq. ft 15-20% slope increment X 17.5% median slope value =	_____	+
+	_____	sq. ft 20-25% slope increment X 22.5% median slope value =	_____	+
+	_____	sq. ft 25-30% slope increment X 27.5% median slope value =	_____	+
+	_____	sq. ft 30-35% slope increment X 32.5% median slope value =	_____	+
+	_____	sq. ft. 35-40% slope increment X 37.5 % median slope value =	_____	+
	30,000	Total square feet in net buildable area	3,250	Total square feet adjusted for slope

3,250 Total square feet adjusted for slope divided by 30,000 Total square feet in net buildable area
= .108333 Weighted average slope of net buildable area
= 11% (Note: multiply by 100 to convert to percent – round up to nearest whole percent)

Using the table above, an 11% weighted average slope of net buildable area falls within the 5% -- less than 15% range which has a minimum density factor of 83%, less 1.5% for each 1% of average slope in excess of 5%. Since 11% is 6% above 5%, multiply 6 times 1.5 which would equal 9%. Subtract 9% from 83% for an adjusted minimum density factor of 74%. This replaces the minimum density factor in K.C.C. 21A.12.030 table.

VIII. Maximum Dwelling Units Allowed (K.C.C. 21A.12.030 - .040):

This section should be completed only if the proposal includes application of residential density incentives (K.C.C. 21A.34) or transfer of density rights (K.C.C. 21A.37). Maximum density is calculated by adding the bonus or transfer units authorized to the base units calculated in Section III of this worksheet. The maximum density permitted through residential density incentives is 150 percent of the base density (see Section II) of the underlying zoning of the development or 200 percent of the base density for proposals with 100 percent affordable units. The maximum density permitted through transfer of density rights is 150 percent of the base density (see Section II) of the underlying zoning of the development.

_____ base density in dwelling units per acre see (Section II) X 150% = _____ maximum density
_____ maximum density in dwelling units per acre X _____ site area in acres = _____
maximum dwelling units allowed utilizing density incentives (K.C.C. 21A.34)

_____ base density in dwelling units per acre (see Section II) X 200% = _____ maximum density
_____ maximum density in dwelling units per acre X _____ site area in acres = _____
maximum dwelling units allowed utilizing density incentives with 100 percent affordable units (K.C.C. 21A.34)

_____ base density in dwelling units per acre (see Section II) X 150% = _____ maximum density
_____ maximum density in dwelling units per acre X _____ site area in acres = _____
maximum dwelling units allowed utilizing density transfers (K.C.C. 21A.37)

Calculation:

	_____	base allowable dwelling units calculated in Section III
+	_____	bonus units authorized by K.C.C. 21A.34
+	_____	transfer units authorized by K.C.C. 21A.37
	_____	total dwelling units (cannot exceed maximum calculated above)

IX. Minimum Lot Area For Construction (K.C.C. 21A.12.100):

Except as provided for nonconformances in K.C.C. 21A.32:

A. In the UR and R zones, no construction shall be permitted on a lot that contains an area of less than 2,500 square feet or that does not comply with the applicable minimum lot width, except for townhouse developments, zero-lot-line subdivisions, or lots created prior to February 2, 1995, in a recorded subdivision or short subdivision which complied with applicable laws, and;

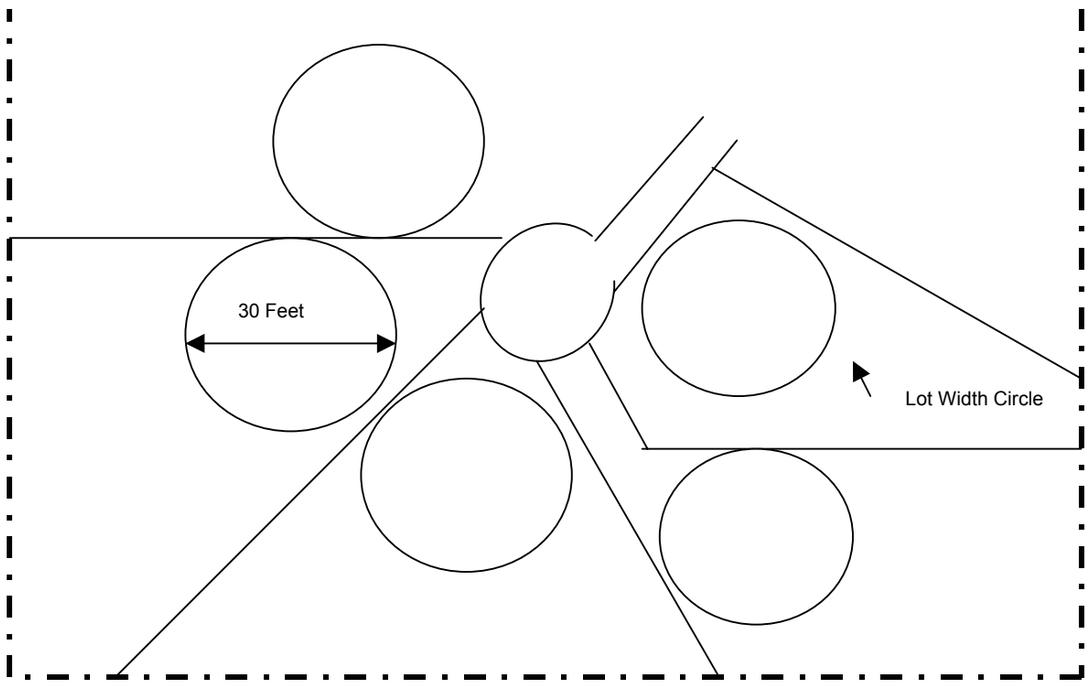
B. In the A, F, or RA Zones:

1. Construction shall not be permitted on a lot containing less than 5,000 square feet; and

2. Construction shall be limited to one dwelling unit and residential accessory uses for lots containing greater than 5,000 square feet, but less than 12,500 square feet. (K.C.C. 21A.12.100)

X. Lot Width (K.C.C. 21A.12.050(B)):

Lot widths shall be measured by scaling a circle of the applicable diameter within the boundaries of the lot as shown below, provided than an access easement shall not be included within the circle. (See K.C.C. 21A.12.050).



Lot Width Measurement